



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,930	09/30/2003	Terry L. Schneider	7784-000553CPB	5157

27572 7590 06/01/2006

HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. BOX 828  
BLOOMFIELD HILLS, MI 48303

EXAMINER
----------

DIXON, MERRICK L

ART UNIT	PAPER NUMBER
----------	--------------

1774

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/674,930	<b>Applicant(s)</b> SCHNEIDER, TERRY L.	
	<b>Examiner</b> Merrick Dixon	<b>Art Unit</b> 1774	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on preappeal conf. 3-9-06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



**MERRICK DIXON  
PRIMARY EXAMINER**

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1774

15

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16

Claims 1-3,5-8,10-17,19-30,33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paine et al ( US 5614305) in view of Derwent-1994-086773" Bonding material for electronic appts.- comprises insulation resin base material contg. Dispersed conductive fine particles made of conductive shape memory alloy"(hereinafter, "SMA')

The cited primary reference teaches the basic claimed invention including a composition comprising a base material with a plurality of SMA fibers therein – col 3, lines 43- col 4, line 14; col 4, lines 14; col 13, lines 6-18, col 15, claim 1. The primary reference fails to teach the aspect that such composition could include sma particles. The secondary reference to SMA teaches this aspect in Abstract in addition to sma particles. It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to and utilize the resulting matrix taught by the primary reference to produce enhanced pains with sma particles- see col 9, line 25. Concerning claims 2,13,15,25 and 34, the secondary reference teaches similar claimed particle dimensions see Abstract. Concerning claims 3 and 16, the primary reference teaches nitinol particles in col 3, lines 43-44. Concerning claims 5,17,8,21 and 35, the primary reference teaches that the particles could be both randomly and/or evenly distributed throughout the material- col 4, lines 45-52.

Art Unit: 1774

Concerning claims 6,7,19,20,28 and 29,the primary reference teaches similarly claimed percentages throughout the disclosure- see col 5, lines 43-51; claim 13.. Concerning claims 10 ,11 23 and 22, the primary reference teaches martensitic phase for the particles- claim 1. In regards to claims 11 and 23, Paine et al, teaches its SMA particles to undergo transformations in col 1, line 63. It is notoriously well known , in the art, that SMA transforms between its martensitic and austenitic phases when external forces is accordingly applied thereto. It is submitted that such transformations would indeed occur between the phases of the reference's SMA, in the absence of unexpected results. Concerning claims 2,12,24,27 and 33, The primary reference teaches similar sizes in col 8, lines 14-27; col 9, line 19- col 10, line 7

17

Claims 4,18,30,31,32,9 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over SMA and Paine et al('305) as applied to claims 1-3,5-8,10-17,19-30,33-35 and above, and further in view of Chiou et al( US 5369163). Chiou et al teaches that it is known in the art to use the above composition as paint- col 7, lines 42-43; col 9, line 25. Concerning claims 9 and 36, the secondary reference teaches paint material in col 7, line 42; col 9, line 25. The Chiou et al reference teaches various shapes for its particles including spherical ones – see .col 8, lines 22-59; col 26, Example 173

18

Art Unit: 1774

Applicants who wish to send a facsimile (draft copies) for the examiner's immediate review can do so by using the Examiner's personal fax number at 571-273-1520. The faxing of all papers must conform with the notice published in the Official Gazette, 1096 O.G. 30 ( November 15, 1989). **NOTE: All facsimiles sent to the examiner's**

**personal fax number should be in draft-forms and will be treated as informal.**

**Same facsimiles will not be entered in the related applications unless otherwise agreed and noted by the examiner.**

**The fax number for all other fascimile is 571-273-8300.**

Information about **the status of an application** may be obtained from the Patent Information Retrieval system (**Private PAIR**).

Status inquires for **published applications** may be retrieved from either **Private PAIR** or **Public PAIR**. Questions about the PAIR system should be directed to the Electronic Business Center at **866-217-9197**.

Any questions concerning the instant communication should be directed to Examiner Dixon, at 571-272-1520, Mondays, Wednesdays and Thursdays, between 12 noon and 8 PM, eastern time .



Merrick Dixon

Primary Examiner

Group 1700